AN OVERVIEW OF THE INDUSTRY

THE TIMBER ECONOMY

The Washington forest products industry was staggered in 1980 by a severe national slump in housing construction, primarily because of high interest rates. The housing slump continued on into 1981 and then a national recession began in July. This recession continued for 16 months until November, 1982 and then the economy began to slowly expand. The "early '80s recession" matched in duration the long recession of the mid-1970s, and these two recessions rank as the longest of the eight recessions in the post-World War II era. During 1982, real Gross National Product in the United States actually declined 1.9 percent.

Washington continues to rank high in the Wood Products sector, producing 8.5 percent of the roundwood and 13.8 percent of the softwood lumber in the nation. The state also produced 7.1 percent of the plywood production and accounted for 75 percent of the softwood log exports nationally.

National housing starts were only 1,062,200 in 1982, a 36-year low. Comparing the housing situation in Washington with the nation shows a much more severe reduction in the state than for the nation. Housing starts nationally declined by 39 percent from 1979 to 1982; in Washington state they declined 66 percent.

	HOUSING STARTS	
YEAR	National (Millions)	Washington (Thousands)
1979	1.74	50.6
1980	1.32	32.8
1981	1.10	24.3
1982	1.06	17.3

Changes from 1980 to 1982 were:[1]

- o Plywood production down 12.5 percent to 1.2 billion square feet, 3/8-inch basis.
- o Softwood lumber production down 5 percent to 3 billion board feet.
- o Log export volume down very slightly. However, 1981 had a dip of about 25 percent below the 1980 shipment volume. The Chinese entered the market in strong fashion in 1982 to provide the rebound.
- o Chip export volume down 10 percent to 388 thousand tons.

Washington's total timber harvest (Figure 1) for 1982 was 5.1 billion board feet, up slightly from the 1981 level, but 11 percent below the 1980 harvest. The harvest for 1982 is at a level similar to that of 20 years earlier. To add further perspective, the peak year for timber harvest was 1973 with 7.8 billion board feet removed.

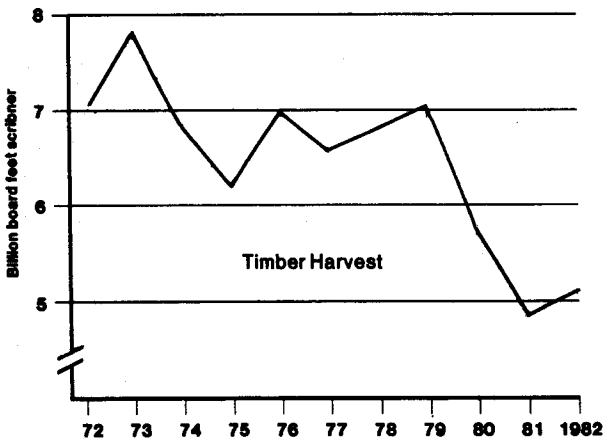
Total wood used by Washington mills is shown in Figure 2. In developing this graph final units of production were converted to log equivalents, Scribner scale. Pulp and Board residue volume consumed does not represent additional timber harvest but is the use of by-products primarily from the Lumber and Veneer and Plywood sectors. The Pole, Post and Piling sector is not shown due to graphics limitations, consuming only 17 million board feet (a fraction of 1 percent of all roundwood consumed). However, it produces high value specialty products and deserves to be recognized.

[1]Production figures beyond Figure 2 are based on mill survey results.

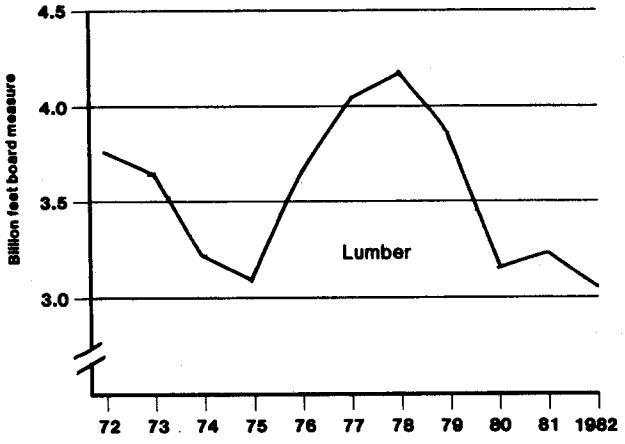
Employment[2] in lumber and wood products (SIC 24) reflects the sagging economy, dropping 16 percent from 1980 to 39,000 in 1982. Employment in paper and allied products (SIC 26) also declined, but only 8 percent from 1980 to 16,200 in 1982. These data compare with national employment declines of 10.2 percent for lumber and wood products and 4.8 percent for paper and allied products. What these numbers show is a more severe contraction of the forest products industry in the State of Washington relative to the national average during the period 1980-1982.

[2]Employment and wage data were reported to the State of Washington Department of Employment Security in quarterly tax reports, subject to the Washington Employment Security Act. Timber industry employment (SIC 24 and 26) did not include some workers, such as longshore workers and truckers, whose employment was not entirely attributable to the timber industry.

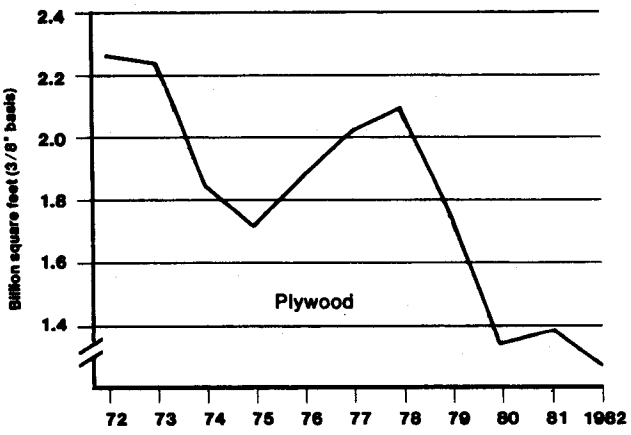
Figure 1 Output of major timber products for Washington, 1972-1982



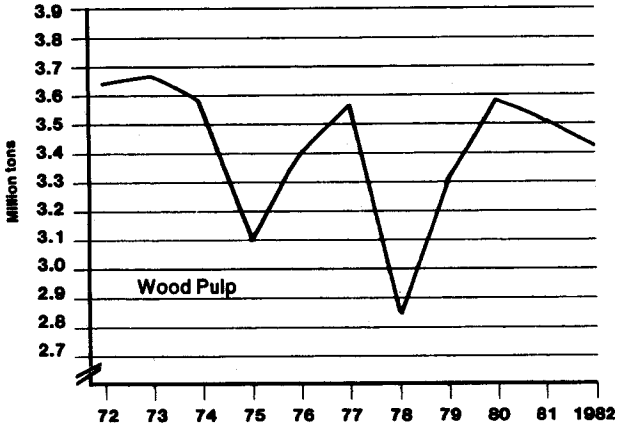
Source: State of Washington
Department of Natural Resouces



Source: Western Wood Products Association



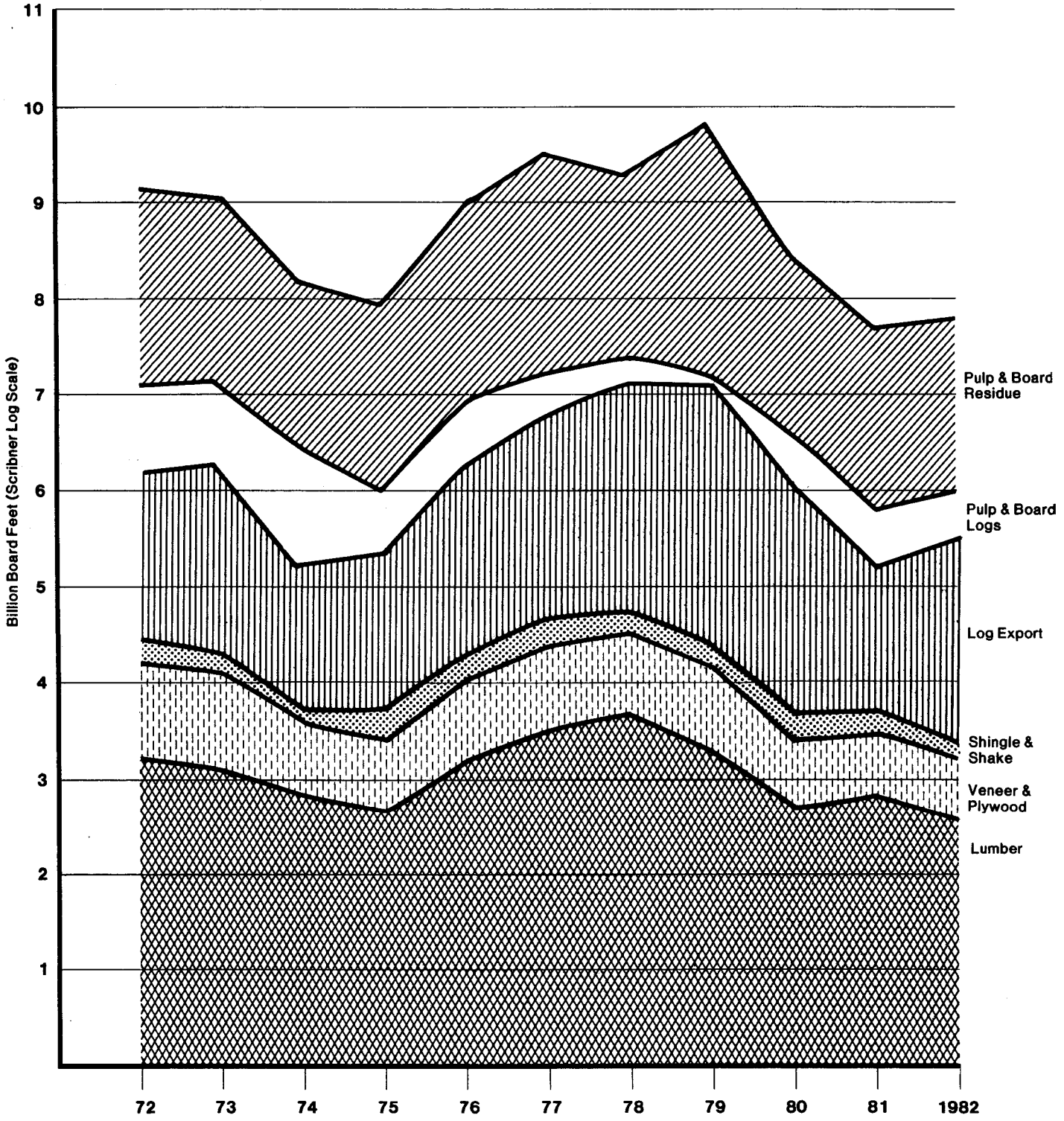
Source: American Plywood Association



Source: Northwest Pulp & Paper Association
Current Industrial Reports
(Pulp, Paper and Board—M26A)

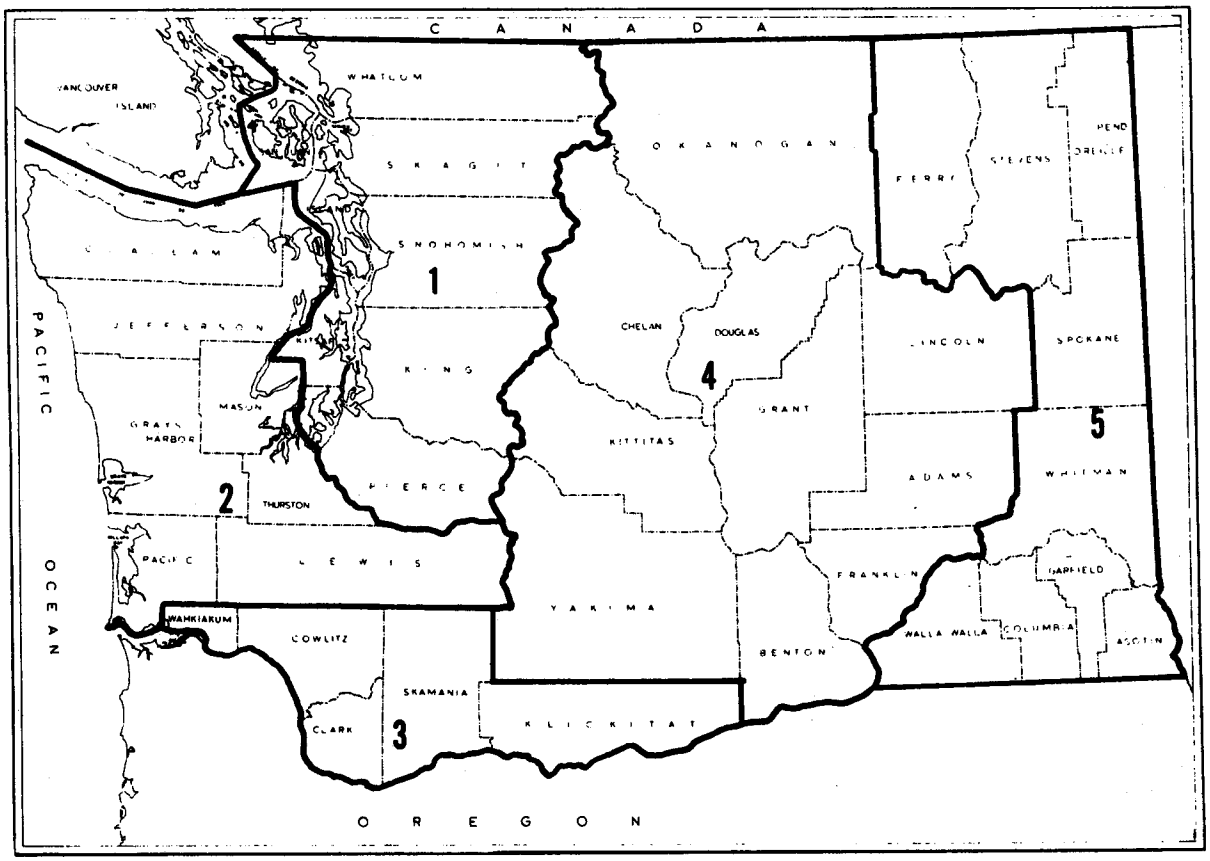
Note: 1982 estimated

Figure 2 Washington wood use by major forest industries, 1972-1982†
(Converted to log equivalent of final product)



† Pole, Post and Piling Industry volume less than 100 million board feet

Figure 3 Washington mill survey five economic areas encompassing the thirty-nine counties



The five Economic Areas used in this report to show regional consumption of wood and regional production of wood products are:

1. Puget Sound
2. Olympic Peninsula
3. Lower Columbia
4. Central Washington
5. Inland Empire

INDUSTRY CHARACTERISTICS

The industry is divided into six segments for purposes of description in this report: Lumber; Veneer and Plywood;[3] Pulp and Board; Log Export; Shake and Shingle; and Pole, Post and Piling. Where individual industry data were sufficient to avoid disclosure of confidential information, each industry sector was described separately. When fewer than three operations existed in a county, two or more counties were combined to present industry information. Also, the data are presented for each of the five Economic Areas delineated in Figure 3. In all

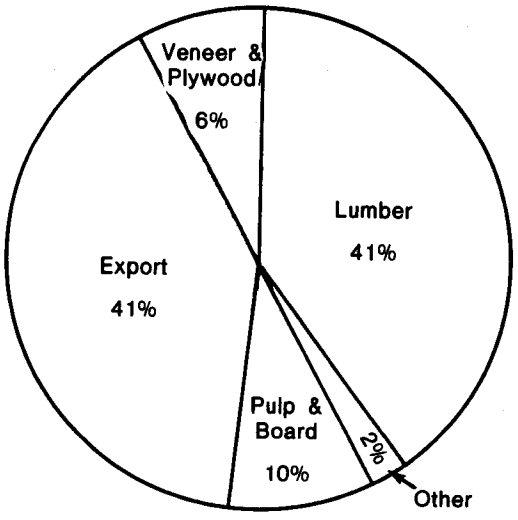
[3]The Veneer and Plywood Industry consists mainly of mills producing softwood veneer and plywood. However, a few of these mills do use small volumes of local hardwoods.

cases, data are provided at the most detailed level feasible without disclosing proprietary information. Wherever feasible, these groupings have remained the same as those used in previous surveys to allow comparison. Comparison between industry sectors and Economic Areas can be made by using Tables 1 through 10 in the Appendix.

WOOD CONSUMPTION

During 1982, Washington's primary forest products industries consumed about 5.2 billion board feet of logs[4], 31 million board feet of other wood and 5.5 million tons of chips and wood residue. Sound logs comprised 88 percent of the total roundwood. Export accounted for 46 percent of sound log-use while sawmills consumed 43 percent. Utility and cull logs account for 12 percent of total roundwood with the Pulp and Board Industry consuming 67 percent of these materials. Figure 4 illustrates the total log consumption by industry sector.

Figure 4 Log consumption by type of industry



The 5.5 million tons of chips and residues consumed by the Pulp and Board Industry consisted of mill residues and material from roundwood chipping plants as well as other fiber residues. This volume is equivalent to 2.8 billion board feet of roundwood logs. Thus, total wood consumption by the forest products industry can be expressed as the equivalent of 8.0 billion board feet (Scribner) for 1982. However, most of the chips were by-products from manufacturing operations.

The forest products industries relied on a number of ownerships for their log supplies. Yet over 60 percent of industry consumption (including log export) was met from forest industry lands. This is interesting in light of the fact that forest industry only owns 26 percent of the commercial forest lands in the state. It reflects in part the bidding for stumpage on public lands in 1979 and 1980. Owners of overbid sales found that it was not economical to log and some chose not to harvest these sales when the recession occurred.

Ownership		Log supply
		(Percent)
State		10
National Forest		16
Bureau of Land Management		†
Other public		2
Total public		28
Forest Industry	Own wood supply	24
	Other wood supply	40
Farmer & Misc. private		8
Total private		72
All owners		100

†Less than 0.5 percent.

[4]Scribner log rule has been used to express board foot volume of logs. In some cases, it has been used to provide a board foot equivalent for chips, cordwood and other materials commonly measured in units, tons, pieces, etc.

Log flows came from the following National Forests:

National Forest	National Forest log flow
	(Percent)
Gifford Pinchot	26
Olympic	24
Mt. Baker—Snoqualmie	24
Wenatchee	13
Okanogan	5
Colville	3
Other	5
All National Forests	100

Dependence for timber supply by ownership class is expressed by summing individual mills that obtain more than two-thirds of their logs from a single ownership class. Percents are taken as a share of 549 mills in the state.

Ownership	Mills Over two-thirds dependent	
	(Number)	(Percent)
State	44	8.0
National Forest	30	5.5
Bureau of Land Management	—	—
Other public	8	1.5
Total public	82	15.0
Forest Industry { Own wood supply	29	5.3
Forest Industry { Other wood supply	162	29.5
Farmer & Misc. private	73	13.3
Total private	264	48.1
All owners	346	63.1

At the state level, Douglas fir (46 percent) and hemlock[5] (35 percent) were the dominant species consumed by the industry during 1982. In Western Washington the three major species (in order of importance) were Douglas fir, hemlock and western redcedar. Douglas fir and Ponderosa pine were the major species in Eastern Washington.

Most segments of the industry use several species; however, two sectors tend to be species-specific. The Pole, Post and Piling Industry is 70 percent dependent on Douglas fir. The Shake and Shingle Industry is almost exclusively dependent on western redcedar.

Washington supplied 95 percent of the industry's log consumption. Oregon contributed 2.5 percent, with most (81 percent of this volume being consumed in the Lower Columbia Area[6].

RESIDUES

Production

The Sawmill; Veneer and Plywood; Shake and Shingle; Pole, Post and Piling; and Export segments of the industry generated 4.3 million tons of wood and bark residues in 1982. Of this amount, the Sawmill, and Veneer and Plywood sectors provided 94 percent of the total and of their share, 98 percent was utilized.

Of all residues produced, 97 percent was used. The Pulp and Board Industry took 1.8 million tons (42 percent) while fuel use accounted for nearly 1.8 million tons (42 percent) of all residues.

Utilization

A significant achievement of the forest products industry has been the relatively high use of wood residues. Only 3 percent was unused in 1982.

[5]Western hemlock and mountain hemlock have been combined under the generic designation of hemlock in this report.

[6]Although Klickitat County lies east of the Cascade Range, it has been included in the Lower Columbia Area and is considered part of Western Washington for report purposes.

Wood residue disposition	Percent
Pulp & Board	56
Fuel	30
Other uses	11
Unused	3
All wood residue	100

Figure 5 Relative and absolute residue volume